REMARKS

Claims 1-31 are pending in the present patent application. Claims 5, 7, 13, 21, 23, 27 and 31 have been canceled. Claims 1, 6, 8, 11, 14, 17, 19, 22, 25, 28, and 30 have been amended. No new matter has been added to the amended claims. Support for the amendments can be found in the original disclosure. Reconsideration of the claims is respectfully requested in light of the amendments.

Rejections of Claims 1-31

The office action rejected claims 1 and 3-31 as being anticipated by U.S. Patent 5,612,833 to Yarmchuk et al. The office action also rejected claim 2 as being obvious over Yarmchuk in view of U.S. Patent 6,707,632 to Raphael.

Claim 1 has been amended to recite, "causing the write head to write a servo pattern, a trigger pattern, and a propagation pattern onto a disk-type storage medium, wherein said trigger pattern includes a sync mark; ...

a third step of determining a write time interval between the instant at which said read head detects said trigger pattern written on said disk-type storage medium and the instant at which said write head writes a next trigger pattern onto the disk-type storage medium, wherein said third step causes said read head to detect a time difference between trigger patterns written onto radially adjacent tracks of said disk-type storage medium. "

The third step corresponds to canceled claims 5 and 7. On page 3, lines 2-3, the office action states that "it is interpreted by the examiner that the precise timing marks is a trigger pattern." Applicants respectfully disagree.

The "trigger pattern" of amended claim 1 includes a sync mark. Yarmchuk does not disclose or suggest that the "timing marks" include a sync mark. Support for this amendment can be found in the specification of the present application, e.g., at page 18, lines 20-22.

Also on page 3, lines 13-14, the office states that "it is interpreted by the examiner that the position error signal (PES) includes a time difference between trigger patterns." Applicants respectfully disagree.

A position error signal (PES) is generated by the read head depending on the burst patterns. The PES is used to detect a deviation of the read head or write head from the target

data track. See the Background of the Invention section of the present application at page 2, lines 13-15.

Yarmchuk does not disclose or suggest that the PES includes a time difference between trigger patterns. Instead, the PES is disclosed as including only position information.

Specifically, Yarmchuk discloses that "the observed position signal equals the sum of the absolute position X and the burst position error E. This signal X+E is combined at a standard loop reference summing point 154 with the reference track value R to form the position error signal or PES. In usual fashion the sign shown next to the incoming arrows at a summing point represents a sign factor to apply to each signal before summing, hence the PES equals R-(X+E)." Yarmchuk, col. 15, lines 46-50.

"Each individual PES reading is used to adjust timing delay unit 31 in a manner that modulates the product servopattern as it is being written during the adjacent region 104 of the disk." Yarmchuk col. 14, lines 42-45.

Amended claim 1, on the other hand, recites causing "said read head to *detect a time difference between trigger patterns* written onto radially adjacent tracks of said disk-type storage medium." This step is not shown in or suggested by Yarmchuk. The present invention writes servo information on a disk without needing to write clock data in the outer area of the disk using a dedicated clock head.
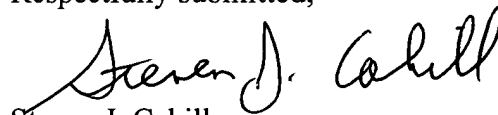
Amended claim 1 is novel and nonobvious over Yarmchuk et al. for at least these reasons. Amended independent claims 8, 11, 14, 17, 19, 22, 25, 28, and 30 are also allowable for similar reasons.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-242-8300.

Respectfully submitted,

Steven J. Cahill
Reg. No. 44,578
representing Hitachi Global Storage Technologies
650-242-8300